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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/518,703

12/20/2004

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5370

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EXAMINER

YANG, JIE

ART UNIT

PAPER NUMBER

1793

MAIL DATE

DELIVERY MODE

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/518,703	Applicant(s) BONNEMANN ET AL.	
	Examiner JIE YANG	Art Unit 1793	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 30 November 2007.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-18 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-18 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claims 1-18 are pending in application, wherein claims 1-11, and 14 have been amended.

Status of the Precious Rejection

The previous rejection of claim 3 under the second paragraph of 35 U.S.C. 112 as being insufficient antecedent basis is withdrawn in view of applicant's arguments/amendment marked 11/30/2007.

The previous rejection of claims 1-2, 5-7, 9 and 12-13 under 35 U.S.C. 103(a) as being obvious over Shouheng Sun et al (NPL: Science, Vol.287, P1989, 2000, thereafter 'S287) in view of Bonnemann et al (US 5,308,377, thereafter US'377) is maintained. The amended limitations do not change the claimed scopes.

The previous rejection of claim 10 under 35 U.S.C. 103(a) as being obvious over 'S287 in view of US'377 as applied in claims 1-2, 5-7, 9 and 12-13 and further in view of the admitted prior art (Specification, page 2, Line 5-13) is maintained. The amended limitations do not change the claimed scopes.

The previous rejection of claims 3-4, 8,11, and 14-18 under 35 U.S.C. 103(a) as being obvious over 'S287 in view of US'377 as applied on claims 1-2, 5-7, 9-10 and 12-13 and further in view of Bonnemann et al (US 6,531,304, thereafter US'304) is maintained. The amended limitations do not change the claimed scopes.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-2, 5-7, 9 and 12-13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Shouheng Sun et al (NPL: Science, Vol.287, P1989, 2000, thereafter 'S287) in view of Bonnemann et al (US 5,308,377, thereafter US'377).

'S287 in view of US'377 is applied to the claims 1-2, 5-7, 9, and 12-13, for the same reason as stated in the previous rejection dated 08/31/2007.

Claim 10 is rejected under 35 U.S.C. 103(a) as being unpatentable over 'S287 in view of US'377 as applied in claims 1-2, 5-7, 9 and 12-13 and further in view of the admitted prior art (Specification, page 2, Line 5-13).

'S287 in view of US'377, and further in view of the admitted prior art (Specification, page 2, Line 5-13), is applied to the claim 10, for the same reason as stated in the previous rejection dated 08/31/2007.

Claims 3-4, 8,11, and 14-18 are rejected under 35 U.S.C. 103(a) as being unpatentable over 'S287 in view of US'377 as applied on claims 1-2, 5-7, 9-10 and 12-13 and further in view of Bonnemann et al (US 6,531,304, thereafter US'304).

'S287 in view of US'377, and further in view of US'304 is applied to the claims 3-4, 8, 11, and 14-18, for the same reason as stated in the previous rejection dated 08/31/2007.

Response to Arguments

Applicant's arguments with respect to the rejections for claims 1-2, 5-7, 9 and 12-13 over 'S287 in view of US'377; the rejections for claim 10 over 'S287 in view of US'377, and further in view of the admitted prior art (Specification, page 2, Line 5-13); and the rejections for claims 3-4, 8,11, and 14-18 under 35 U.S.C. 103(a) as being unpatentable over 'S287 in view of US'377, and further in view of US'304, have been fully considered but they are not persuasive.

Applicant argues:

1. The combination of reference does not make out a prima facie case of obviousness. 'S287 does not use metal hydrides in his process and, therefore, there is no reason apparent on the present record why a person having ordinary skill in the art should employ US'377's complexing agents in 'S287 process. The examiner does not give a plausible reason why persons skilled in the art should employ US'377's complexing agent in 'S287 process.

2. The present invention is clearly characterized by unexpected results. Instant Example 1 versus comparative Example 7 shows that the quite unexpectedly use of the organometallic compound has the effect of narrowing the size distribution.

Examiner Responds:

Regarding argument 1, as pointed out in the prior office action dated 08/31/2007, 'S287 in view US'304 teaches the claimed limitations. Both prior arts teach the similar chemical reduction process for producing the size controlled metal or alloy nanoparticles as claimed in the instant application. US'304 teaches choosing organometallic compound of a metal of group 13 to recover the metal or alloy powder in the pure state with particular advantage by way of a simple filtration from the clear organic solution (col.2, line 37 to col.3, line 11), which gives a good motivation to apply US'304's technique in the process of 'S287.

Regarding argument 2, 'S287 teaches the FePt particle size is tunable from 3-10 nanometer diameter with a standard deviation of less than 5% (Abstract of 'S287), which are within the claimed ranges. Detail discussions please refer to the prior office action dated 08/31/2007.

Conclusion

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within

TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jie Yang whose telephone number is 571-270-1884. The examiner can normally be reached on M-F, 7:30-5:00 EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Roy King can be reached on 571-2721244. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

JY

/Roy King/

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Supervisory Patent Examiner, Art Unit 1742